

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2017-292-WS - ORDER NO. 2018-345(A)
MAY 30, 2018

IN RE:	Application of Carolina Water Service, Inc. for Approval of an Increase in Its Rates for Water and Sewer Services)))	AMENDED ORDER APPROVING RATES AND CHARGES
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This amended Order is being issued to amend Order No. 2018-345 to correct an error in the pro forma estimated Uncollectible Accounts calculation and to reflect the resultant reduction to direct revenues and rates, and to correct the docket caption to conform to the Docket Management System. The remainder of the Order is identical to Order No. 2018-345.

This matter is before the Public Service Commission of South Carolina ("Commission") on the Application of Carolina Water Service, Inc. ("CWS" or "Company") for approval of a new schedule of rates and charges and modifications to certain terms and conditions for the provision of water and sewer services for its customers in South Carolina. CWS filed its Application on November 10, 2017, pursuant to S.C. Code § 58-5-240 and S.C. Code Regs. §§ 103-503, 103-703, 103-512.4.A and 103-712.4.A.

In the Application, CWS requested an increase in revenues for combined operations of \$4,511,414 consisting of a water revenue increase of \$2,272,914 and a sewer revenue increase of \$2,238,500. The revenue increase utilizes a return on equity

(“ROE”) of 10.5% based on the rate of return on rate base methodology and a historical test year beginning September 1, 2016, and ending August 31, 2017.

CWS requested permission to modify its sewer service tariff to reduce the frequency with which customers must test their backflow devices from every year to every two years, and to authorize the Company to terminate service, after notice, to a customer who fails to demonstrate that his backflow device is working properly. App. p. 6, ¶ 20. CWS requested authorization to increase its Water Meter Installation Charge from \$35 to \$45 per year, to more accurately reflect the utility’s cost of providing this service. App. p. 6, ¶ 21. The Company also requested approval of a provision in its tariff limiting the liability of the Company, its agents, and employees for interruption of service, whether caused by acts or omissions, to those remedies provided in the Commission’s rules and regulations. App. p. 6, ¶ 22.

CWS last rate case before this Commission was in Docket No. 2015-199-WS. In that case, the Commission approved a settlement in which CWS received a combined revenue increase of \$3,068,441 based on a \$50,955,443 rate base; an operating margin of 11.95%, an ROE of 9.34%, and a return on rate base of 7.99%.

CWS’ South Carolina operations are classified by the National Association of Regulatory Utility Commissioners (“NARUC”) as a Class A water and wastewater utility according to water and sewer revenues reported on its Application for the test year ending August 31, 2017. The Commission’s approved service area for CWS is in parts of sixteen counties.

I. PROCEDURAL BACKGROUND

The Commission's Clerk's Office instructed CWS to publish a prepared Notice of Filing, one time, in a newspaper of general circulation in the area affected by CWS' Application and to mail copies of the Notice of Filing to all customers affected by the proposed rates and charges and modifications. The Notice of Filing indicated the nature of the Application and advised all interested parties desiring to participate in the scheduled proceeding of the manner and time in which to file the appropriate pleadings. CWS filed affidavits demonstrating the Notice of Filing had been duly published and provided to all customers.

Petitions to Intervene were subsequently filed on behalf of the Forty Love Point Homeowners' Association ("Forty Love"), York County, and James S. Knowlton. The South Carolina Office of Regulatory Staff ("ORS"), a party of record pursuant to S.C. Code § 58-4-10(B), made on-site investigations of CWS' facilities, audited CWS' books and records, issued data requests, and gathered other detailed information concerning CWS' operations.

CWS was represented by Charles L.A. Terreni, and Scott Elliott. Laura P. Valtorta represented Forty Love. Michael K. Kendree represented York County, Mr. Knowlton appeared pro se. Jeffrey M. Nelson, and Florence P. Belser represented the ORS. On March 28, 2018 York County moved to withdraw from the proceedings without prejudice after CWS withdrew its request for approval of the Utility System Improvement Rate ("USIR"). York County's request was granted on the same day. Order No. 2018-38-H.

The Commission held public hearings in Lexington, York, and Greenville counties to allow CWS's customers to present their views regarding the Application. An evidentiary hearing was held April 3-4, 2018, at the Commission's offices in Columbia with the Honorable Swain E. Whitfield, presiding.

The Company presented the testimony of Michael R. Cartin, Operations and Regulatory Affairs Manager (direct, rebuttal and supplemental), Robert M. Hunter, Financial Planning and Analysis Manager (direct and rebuttal), and Bob Gilroy, Vice President of Operations (direct, rebuttal, and testimony responsive to customers who testified at public hearings). Mr. Cartin, testified about the Company's operations and various expenses and capital expenditures made by CWS. Mr. Hunter testified about the Company's finances and revenue requirement, and Mr. Gilroy testified about various aspects of the Company's operations and customer service. The Company also presented the testimony of Dylan W. D'Ascendis, CRRA, Director at ScottMadden, Inc., who testified to the Company's capital structure, cost of debt, and recommended ROE.

Forty Love presented the direct testimony of subdivision residents and customers Barbara King and Jay Dixon. They testified to problems experienced with the sewer system serving Forty Love Point. Mr. Knowlton presented his rebuttal testimony opposing the amount and frequency of the Company's rate increases.

ORS presented the testimony of Matthew Schellinger (direct and surrebuttal), Zachary Payne (direct and surrebuttal), and Douglas H. Carlisle, Jr., Ph.D. (direct and surrebuttal) as a panel. Dr. Carlisle testified to the Company's capital structure, cost of debt, and recommended ROE.

Dr. Carlisle's testimony included an analysis and recommendation for an allowed ROE. Mr. Payne testified about ORS's examination of the Application and CWS' books and records and the subsequent accounting and pro forma adjustments recommended by ORS. Mr. Schellinger's direct testimony focused on CWS' compliance with Commission rules and regulations, ORS' business office compliance review, inspections of CWS' water and wastewater systems, test year and proposed revenue, and performance bond requirements.

II. REVIEW OF THE EVIDENCE AND EVIDENTIARY CONCLUSIONS

A. Standards and Required Findings

In considering the Application, the Commission must ascertain and fix just and reasonable rates, standards, classifications, regulations, practices, and measurements of service to be furnished. The Commission must give due consideration to the Company's total revenue requirements and review the operating revenues and operating expenses of CWS to establish adequate and reasonable levels of revenues and expenses. The Commission will consider a fair rate of return for CWS based on the record and any increase must be just and reasonable and free of undue discrimination. CWS has also asked this Commission to approve revenues based on an authorized ROE established to allow CWS the opportunity to earn a fair return.

After evaluation of the positions of the parties, the Commission reaches the legal and factual conclusions discussed below, based on its review of the facts and evidence of record. The evidence supporting the Company's business and legal status is contained in

the Application filed by CWS, testimony, and in prior Commission orders in the docket files of the Commission, of which the Commission takes judicial notice.

CWS has approximately 16,000 water customers and 14,000 sewer customers in Lexington, Richland, Sumter, Aiken, Saluda, Orangeburg, Beaufort, Georgetown, Abbeville, Union, Anderson, York, Cherokee, Greenville, Greenwood, and Williamsburg counties. App. Schd. F; R. p. 345 (Gilroy Dir. p. 2, ll. 21-24). As a public utility, its operations are subject to the jurisdiction of the Commission pursuant to S.C. Code §§ 58-5-10 et seq.

B. Test Year

A fundamental principle of the ratemaking process is the establishment of a historical test year as the basis for calculating a utility's return on rate base. To determine the utility's expenses and revenues, we must select a 'test year' for the measurement of the expenses and revenues. *Heater of Seabrook v. PSC*, 324 S.C. 56, 59 n.1 (1996). While the Commission considers a utility's proposed rate increase based upon occurrences within the test year, the Commission will also consider adjustments for any known and measurable out-of-test year changes in expenses, revenues, and investments, and will also consider adjustments for any unusual situations which occurred in the test year. When the test year figures are atypical, the Commission should adjust the test year data. See *S. Bell Tel. & Tel. Co. v. Pub. Serv. Com*, 270 S.C. 590, 603 (1978).

In its Application, CWS utilized a historic test year, the twelve months beginning September 1, 2016, and ending August 31, 2017, with adjustments for 2018 expectations. App. p.2, ¶ 5. ORS used the same historical test year. R. p. 729 (Payne Dir. p. 2, ll. 5-

10). None of the other parties contested CWS' proposed test year. Based on the information available to the Commission, and that none of the parties objected to CWS' proposed test year, the Commission concludes that the test year beginning September 1, 2016, and ending August 31, 2017, is appropriate for this Application.

C. Rate of Return on Rate Base

The Company requested rate base and rate of return treatment for its Application. App. pp. 4-5, ¶ 16. No other party of record proposed an alternative method for determining just and reasonable rates and the testimony of ORS' witnesses Payne and Carlisle assumes that return on rate base will be the methodology employed.

The Commission has wide latitude in selecting a rate setting methodology. Heater of Seabrook, at 64. Even though S.C. Code § 58-5-240(H) requires the Commission to specify an operating margin in all water and sewer rate cases, the Commission is not precluded by that statute from employing the return on rate base approach to ratemaking. Id. Operating margin "is less appropriate for utilities that have large rate bases and need to earn a rate of return sufficient to obtain the necessary debt and equity capital that a large utility needs for sound operation." Id at 65. In the Company's last rate case, the Commission employed the return on rate base methodology. The Commission finds the return on rate base methodology is appropriate. The Company's rate base, according to its Application, is \$54,853,170. App. Ex. B, Sch. C, p. 1.

The determination of return on rate base requires consideration of three components, namely: capital structure, cost of equity (or "ROE") and the cost of debt. R. pp. 397-398 (D' Ascendis Dir. pp. 4-5).

Mr. D'Ascendis and Dr. Carlisle agreed the capital structure and cost of debt of CWS's parent, Utilities, Inc. should be employed: it is 48.11% long-term debt and 51.89% common equity. R. pp. 395 (D'Ascendis Dir. p. 2, ll. 10-17); 649 (Carlisle Dir. p.4, ll. 21-p.5, l. 3). No other party disagreed. The Commission finds this capital structure supported by the uncontroverted testimony of the parties.

Mr. D'Ascendis and Dr. Carlisle disagreed on CWS's cost of debt. Mr. D'Ascendis used an embedded debt rate of 6.60%. Dr. Carlisle lowered CWS's cost of debt rate from 6.60% to 6.58% due to what he described as "unfavorable terms" of the Company's long-term debt. R. p. 649 (Carlisle Dir., p. 4, l. 21 – p. 5, l. 9). Dr. Carlisle argued the Company imprudently refinanced its long-term debt when interest rates were high and agreed to terms which prevent it from refinancing now that interest rates are lower. Id. Mr. D' Ascendis countered that the Company's long-term debt financing, which was agreed to in 2006, was in line with bond yields for similarly situated companies at the time. R. p. 438 (D'Ascendis, Rebut. p. 3, ll. 1-14). However, the Commission has not been provided any evidence to support the ORS position. We find the appropriate long-term debt rate for CWS is 6.60%.

The rate of return on common equity, or ROE, is a key figure used in calculating a utility's overall rate of return. *Porter v. PSC*, 333 S.C. 12 (1998). A utility is entitled to the opportunity to earn a fair rate of return. *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) and *Bluefield Water Works Improvement Co. v. Public Service Comm'n*, 262 U.S. 679 (1922),

Mr. D'Ascendis recommended that CWS' ROE should fall within a range of 10.45% to 10.95%. R. p. 397 (D'Ascendis Dir. p. 4, ll. 4-20 (Table 2)).

To determine the cost of equity, Mr. D'Ascendis used the Discounted Cash Flow ("DCF") Risk Premium Model ("RPM") and the Capital Asset Pricing Model ("CAP-M") and ("ECAP-M") model to similar risk companies, i.e. proxy groups, of regulated and non-regulated companies. R. pp. 396-397 (D'Ascendis Direct pp. 3-4).

The proxy groups were used by Mr. D'Ascendis because the Company's common stock is not publicly traded, and, therefore, CWS's market-based common equity cost rates cannot be determined directly. Id. He used a proxy group of eight water companies whose common stocks were actively traded for insight into a common equity cost rate applicable to CWS. R. p. 402 (D'Ascendis Direct, p.10). The utility proxy group was selected according to these criteria: 1) they are included in the Water Utility Group of Value Line's Standard Edition (October 13, 2017); 2) they have 70% or greater of 2016 total operating income and 70% or greater of 2016 total assets attributable to regulated water operations; 3) at the time of the preparation of this testimony, they had not publicly announced that they were involved in any major merger or acquisition activity (i.e. one publicly traded utility merging with or acquiring another); 4) they have not cut or omitted their common dividends during the five years ending 2016 or through the time of the preparation of this testimony; 5) they have Value Line and Bloomberg adjusted betas; 6) they have a positive Value Line five-year dividends per share ("DPS") growth rate projection; and 7) they have Value Line, Reuters, Zacks, or Yahoo! Finance consensus five-year earnings per share ("EPS") growth rate projections. Id. The companies that met

Mr. D'Ascendis' criteria were: American States Water Co., American Water Works Co., Inc., Aqua America, Inc., California Water Service Group, Connecticut Water Service, Inc., Middlesex Water Co., SJW Corp., and York Water Co. Id.

Mr. D'Ascendis also selected a proxy group of twenty-eight non-price regulated companies comparable in total risk to the proxy group of water companies. R. Ex. 8 (D'Ascendis Direct, Ex. 1, Schd. DWD-6). The criteria for non-price regulated proxy group were: 1) they must be covered by Value Line Investment Survey (Standard Edition); 2) they must be domestic, non-price regulated companies, i.e., non-utilities; 3) their beta coefficients must lie within plus or minus two standard deviations of the average unadjusted beta of the utility proxy group; and 4) the residual standard errors of the Value Line regressions, which gave rise to the unadjusted beta coefficients, must lie within plus or minus two standard deviations of the average residual standard error of the utility proxy group. R, p. 423 (D'Ascendis Direct, p. 30, ll. 15-23).

Mr. D'Ascendis' DCF analysis yields cost rates for the water company proxy group of 8.64%. The RPM analysis produced a common equity cost rate of 10.69% for the water company proxy group. The CAP-M cost rate is 10.51% for the water company proxy group. D'Ascendis averaged the mean, 10.43%, and median, 10.58%, equity costs of the water company proxy group, resulting in 10.51%. R. p. 424 (D'Ascendis Direct, p. 29, ll. 10-15). With the non-price regulated proxy group, the DCF yields 13.57%, the RPM, 11.91%, and the CAP-M/ECAP-M, 11.15%. R. p. 424 (D'Ascendis Direct, pp. 31, l. 12-32, l. 4). The average of the mean and median of the non-price regulated proxy group is 12.06%. R. p. 425 (D'Ascendis Direct, p. 32, ll. 7-14).

The approximate average of the results produced by any of Mr. D’Ascendis’ models is 10.45%. R. p. 426 (D’Ascendis Direct, p. 33, ll. 5-9). He also recommended an upward adjustment of 0.50% ROE, due to CWS’s small size. R. pp. 426 - 429 (D’Ascendis Direct, p. 33, l. 11- 36, l. 20). His average ROE after the size adjustment is 10.95%. R. p. 429 (D’Ascendis Direct, p. 36, ll. 17-20). Mr. D’Ascendis recommended range of ROE was 10.45% to 10.95%. R. p. 397 (D’Ascendis Dir. p. 4, ll. 4-20 (Table 2)).

Dr. Carlisle employed the DCF model, the Comparable Earnings Model (“CEM”), and the CAP-M method to calculate his ROE range of 8.82% to 9.54%. R. p. 647 (Carlisle Direct, p. 2, ll. 12-15).

Dr. Carlisle also used a water company proxy group of ten water companies for his DCF and CAP-M analyses. R. p. 649 (Carlisle Direct, p. 4, ll. 15-20). Dr. Carlisle’s water company proxy group was identical to Mr. D’Ascendis’ water company proxy group except for the addition of Global Water Resources and Artesian Resources. Carlisle Rev. Exhibit DHC-4.

Dr. Carlisle’s DCF analysis yields cost rates for his water company proxy group of 8.82%. R. p. 654 (Carlisle Direct, p. 9, ll. 5-6). Dr. Carlisle did not perform the DCF analysis on non-price regulated proxy group as Mr. D’Ascendis did.

Dr. Carlisle’s CAP-M analysis compared the returns of the companies in his water company proxy group to a “risk free rate of return” (projected 30 yr. Treasury bond yield). R. p. 658 (Carlisle Direct, p. 13, ll. 17-23). Dr. Carlisle’s CAP-M analysis produced a range of 9.38% to 9.70%, which he averaged for a final CAP-M rate of

9.54%. R. p. 659 (Carlisle Direct, p. 14, ll. 12-13). Dr. Carlisle did not perform the CAP-M analysis on comparable non-price regulated stocks, as Mr. D’Ascendis did.

Dr. Carlisle’s CEM analysis, was applied to a group of non-price regulated stocks selected from Value Line with a comparable price volatility factor (“beta” or “ β ”) to those in his water company proxy group. R. p. 655 (Carlisle Dir. p. 10, ll. 1-6). The CEM analysis produced a “retrospective” return on equity of 9.15%, and a “prospective” ROE of 8.63%. Dr. Carlisle averaged the two to arrive at a CEM ROE of 8.89%. R. p. 656 (Carlisle Dir. p. 11, ll. 3-7).

Finally, Dr. Carlisle averaged his DCF, CEM, and CAP-M rates to arrive at his recommended ROE of 9.08%.

Mr. D’Ascendis and Dr. Carlisle disagreed often. Mr. D’Ascendis argued that Dr. Carlisle should have relied on analysts’ estimates of earnings per share rather than historical and projected measures of book value per share, dividends per share, and sales growth to predict growth in earnings per share when performing his DCF analysis. R. p. 438 (D’Ascendis, Rebut. p. 3, l. 15 – p. 7, l. 5). On the other hand, Dr. Carlisle took issue with Mr. D’Ascendis’ reliance on analysts’ projections of earnings per share (“EPS”) as the sole factor in his DCF analysis. R. pp. 666–667 (Carlisle Surr. p. 5, l. 8 – p. 6, l. 12). Dr. Carlisle, instead, also considers dividends per share (“DPS”), book value per share (“BPS”), and revenue or sales. R. pp. 650-651 (Carlisle Dir., pp. 6-7). Mr. D’Ascendis pointed to common market references, such as Yahoo Finance and Bloomberg, which provide earnings per share projections, but not projections of dividends per share, book value per share or sales growth, as evidence the investment community relies on the

former but not the latter. R. p. 458, l. 24 – p. 459, l. 13. Had he done so, Mr. D’Ascendis testified, Dr. Carlisle’s analysis would have produced a higher ROE. R. p. 442 (D’Ascendis Rebut., p. 7, ll. 1-5). Dr. Carlisle disagreed, citing studies showing that analysts’ estimates have been historically overly optimistic, and should not be the sole basis for the DCF analysis. R. pp. 664–666 (Carlisle, Surr. p. 3, l. 6 – p. 5, l. 4).

Mr. D’Ascendis also disagreed with Dr. Carlisle’s CAP-M calculations. He argued that Dr. Carlisle used the wrong measures of market return, and that he should have used the arithmetic mean of monthly total return rates instead of a geometric mean (or compound growth rate). Mr. D’Ascendis contends using the arithmetic produces the best insight into future returns. R. pp. 443–445 (D’ Ascendis Rebut. pp. 8-10). Dr. Carlisle responded that his market return measure better reflects the variety of companies in the market. Dr. Carlisle also defended his use of the geometric mean arguing that the arithmetic mean ignores the “compounding” effect of investing and can mislead investors by masking over the ups and downs of the market. R. p. 668 (Carlisle Surr. p. 7, l. 5 – p. 10, l. 26).

Mr. D’Ascendis criticized Dr. Carlisle for not performing an ECAP-M analysis, which he testified would have produced an equity cost rate of 10.03%. R. pp. 444–445 (D’Ascendis Rebut. p. 9, l. 8 – p. 10, l. 9). Mr. D’Ascendis also testified that Dr. Carlisle’s selection of non-price regulated companies for his CEM analysis failed to reflect the total risk of his water company proxy group. Mr. D’Ascendis performed Dr. Carlisle’s DCF and CAP-M analyses using a group that better reflected the risk of the water proxy group and found cost rates of 14.66% and 9.85% respectively. R. p. 448

(D’Ascendis Rebut. p. 13, ll. 14-24). Using the amended proxy group, Dr. Carlisle’s range would change to 9.57% (DCF), 10.03% (CAP-M), and 12.26% (CEM) with an average of 10.62%. R. p. 449 (D’Ascendis Rebut. p. 14, ll. 4-10).

The Commission finds Mr. D’Ascendis’ arguments persuasive. He provided more indicia of market returns, by using more analytical methods and proxy group calculations. Mr. D’Ascendis’ use of analysts’ estimates for his DCF analysis is supported by consensus, as is his use of the arithmetic mean. The Commission also finds that Mr. D’Ascendis’ non-price regulated proxy group more accurately reflects the total risk faced price regulated utilities and CWS. Furthermore, there is no dispute that CWS is significantly smaller than its proxy group counterparts, and, therefore, it may present a higher risk. . An appropriate ROE for CWS is 10.45% to 10.95%. The Company used an ROE of 10.5% in computing its Application, a return on the low end of Mr. D’Ascendis’ range, and the Commission finds that ROE is supported by the evidence.

Table 1 below indicates the capital structure of the Company, the cost of debt, the cost of equity as approved in this Order, and the resulting rate of return on rate base:

Table 1: Summary of Overall Rate of Return

<u>Type of Capital</u>	<u>Ratios</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
Long-Term Debt	48.11%	6.60%	3.17%
Common Equity	<u>51.89%</u>	10.50%	<u>5.45%</u>
Total	100.00%		8.62%

D. Contested Rate Base Adjustments

The rate base proposed by CWS for combined operations was \$54,853,170. App. Ex B., Sch. C. CWS disputed two of ORS's rate base adjustments: Adj. 32(c) in which ORS proposes to disallow \$1,081,375 spent in connection with a liner of the equalization basin ("EQ Liner") at the Friarsgate wastewater treatment plant, and Adj. 32(d) in which ORS proposes to disallow \$306,552 in engineering costs incurred at the Friarsgate Plant. R. p. 744 (Payne Direct, p. 17).

1. Friarsgate EQ Basin Removal and Site Remediation

The Company proposes to include \$1,081,375 for engineering costs and remediation costs associated with the replacement of the Equalization Basin's ("EQ") liner at the Friarsgate WWTF. An EQ Liner is a heavy-mill plastic liner placed in an in-ground basin that holds water. R. p. 478, ll. 20-24. CWS hired an engineering firm, W.K. Dickson, after an upset occurred at its Friarsgate Wastewater Treatment Facility ("Friarsgate Plant"). W.K. Dickson assisted CWS in formulating and presenting a Corrective Action Plan required by a Consent Order with DHEC. R. p. 555, l. 16 – p. 557, l. 1. W.K. Dickson submitted engineering plans on an expedited basis for various changes and improvements made to the plant. R. p. 555, ll. 19-25. DHEC also required CWS to have a professional engineer who was a wastewater expert on site to supervise the plant's operations. R. p. 556, ll. 14-22. W.K. Dickson also provided required monthly reports to DHEC. R. p. 556, l. 22 – p. 557, l. 1.

The Company was required by a DHEC Consent Order to: 1) remove the existing liner, 2) complete any environmental mitigation efforts concerning the soils under the

existing liner, and 3) replace the EQ Liner. This effort included removing and properly disposing of any affected soils. Once the site was sufficiently mitigated, new soil was brought in, graded, and compacted to prepare the site for the installation of the new liner. Although the EQ plastic liner has yet to be installed, the Company removed the existing EQ Liner and completed the environmental mitigation required by DHEC before the audit cutoff date of February 12, 2018. CWS acted expeditiously to comply with the DHEC mandate. CWS is not asking to recover the cost of the new liner. R. p. 505, ll. 8-14.

CWS witness Cartin testified that the DHEC Consent Order required CWS to remove the EQ Liner at the Friarsgate Plant, remediate the soil underneath the liner, and replace the liner. R. pp. 318-319 (Cartin Rebut. p. 3, l. 3 – p. 4, l. 2). CWS spent \$1,081,375 to remove the EQ Liner and remediate the soil under the liner. Id. The Company had not installed the new liner yet but is in the process of doing so. Id. CWS contends that its compliance with DHEC's Consent Order was required for its continued operations and the public has benefitted from the removal of the old EQ Liner and the soil remediation, and therefore the costs should be included in rate base. Id.

The ORS proposes to disallow these costs because the EQ Liner has not yet been replaced. The ORS reasons that the project included both the engineering and remediation and the replacement of the EQ Liner. ORS's witness, Zachary Payne, testified that, since the new EQ Liner is still under construction, the whole project is not used and useful and should not be included in rate base. R. p. 754 (Payne Surr. p. 4, ll. 7-17).

The Commission finds the measures required by the DHEC Consent Order were in the public interest. Disallowing recovery of remediation costs acts to impair a utility's ability to address environmental concerns and conflicts with the policy of allowing recovery of necessary and prudently incurred costs. These known and measurable expenditures provided prompt regulatory and environmental compliance and immediate environmental and customer benefits. CWS has not requested recovery of the cost of the new EQ Liner, the part of the project that ORS challenges as not used and useful. The Commission finds the \$1,081,375 cost of the removal of the existing EQ Liner and environmental remediation served the Company's customers and the public interest, and the Company is entitled to its recovery.

2. Friarsgate Engineering Costs

ORS proposed to disallow \$306,552 in engineering costs paid to the W.K. Dickson firm for services at the Friarsgate Plant. R. p. 744 (Payne Direct, p. 17, l. 11 (Adj. 32(d))). CWS contends the costs are recoverable because W.K. Dickson was hired to comply with the terms of the Consent Order with DHEC. R. pp. 319-320 (Cartin Rebut. p. 4, l. 3 – p. 5, l. 4). Mr. Cartin testified that W.K. Dickson was hired to design an O&M Manual and take other measures to ensure compliance at the plant. Id. Mr. Gilroy testified that W.K. Dickson was continuously present at the plant following an upset that occurred in June 2016 which led to a DHEC enforcement action. R. p. 353 (Gilroy Direct p. 10 ll. 1-7); R. p. 487, l. 12 – p. 488, l. 9. During that period, W.K. Dickson served as the principal point of contact with DHEC personnel and obtained permission for changes and improvements made to the facility. Id.

ORS took the position the W.K. Dickson costs should not be recoverable because they were incurred to comply with DHEC's Consent Order, which was caused by the Company's failure to adequately operate and maintain the Friarsgate Plant. R. p. 683, ll. 5-22. ORS's witness, Mr. Schellinger also testified the invoices for the work lacked sufficient detail to allow it to determine the work performed, and the work was required by Consent Orders which arose from the Company's violation of its NPDES permit. R. pp.712-715 (Schellinger Surr. p. 5, l. 13 – p. 8, l. 20). If the costs were allowable, Mr. Schellinger testified that they should be booked as operations and maintenance expenses, not capital assets. CWS responded that costs incurred to ensure the Company's compliance with environmental regulations should be recoverable, and that treating them as capital expenditures is consistent with the practice adopted by the Company and the ORS in the settlement of the last rate case. R. pp. 319 - 320 (Cartin Rebut. p. 4, l. 3 – p. 5, l. 4). The Commission finds the engineering fees are recoverable as a capital expense prudently incurred to ensure necessary compliance with environmental regulations.

E. Expenses

CWS contested adjustments proposed by the ORS to the Company's O&M expenses: a reduction of \$96,892 in sludge hauling expenses (Adj. 9(d)), and the disallowance of \$998,606 in legal expenses incurred during litigation involving the I-20 wastewater treatment plant (Adj. 16).

1. Adjustment for Litigation Expenses

The Company proposes to amortize \$998,606 in financial costs and litigation expenses associated with its I-20 sewer system over 66.67 years. R, pp. 316-317 (Cartin

Rebut., p. 1, l. 12 – p. 2, l. 18). These costs were primarily incurred with five actions: 1) a lawsuit brought by the Congaree Riverkeeper in the U.S. District Court, 2) a condemnation action brought by the Town of Lexington, 3) a challenge to DHEC's denial of a permit for the I-20 Plant in the Administrative Law Court, 4) the Town of Lexington's challenge of DHEC's order that it interconnect with CWS brought in the Administrative Law Court, and 5) CWS's lawsuit against the EPA in the United States District Court. Schellinger Sur. p. 3, ll. 1-11. The Company proposed to amortize these costs over 66.7 years, resulting in an expense of \$14,979 per year. R. p. 300 (Cartin, Dir., p. 2, ll. 15-18).

ORS argued the legal expenses should not be allowed for two reasons. Mr. Schellinger testified that legal expenses incurred to defend the Congaree Riverkeeper's lawsuit should not be allowed because the District Court had ruled against CWS finding various violations of its NPDES permit and of effluent limitations since 2009. R. p. 692 (Schellinger Surr. p. 3, l. 11 – p. 4, l. 5). Mr. Schellinger viewed the company's lawsuit against the EPA and its litigation in the Administrative Law Court as related to the Riverkeeper proceeding, a position not disputed by CWS. Schellinger asserts that CWS should not be allowed to recover its legal costs because the actions arose from the Company's violations of environmental regulations. Id.

Schellinger testified the legal costs incurred in the condemnation action should not be recovered because CWS may be allowed to recover some costs if it prevailed. R. p. 730 (Schellinger Surr. p. 4, ll. 6-22). Schellinger also posited the actions before the Administrative Law Court could turn on the outcome of the condemnation action. R. p.

731 (Schellinger Surr. p. 5, ll. 1-12). He testified that since the outcome of the condemnation action was unknown and since if successful CWS may recover its litigation costs, the Commission should establish a regulatory asset in which to defer the litigation costs for future rate making treatment.

Mr. Cartin testified that CWS had no choice but to defend the Congaree Riverkeeper's lawsuit, and to prosecute its related actions. R. p. 490, l. 22 – p. 491, l. 7. He pointed out the Congaree Riverkeeper brought his suit to force an interconnection of the I-20 Plant to the Town of Lexington's sewer system, an action CWS was ready to take but the Town of Lexington would not allow. R. p. 489, ll. 8-20. It was not until 2016, after DHEC ordered the Town of Lexington to seek an interconnection with CWS, that Lexington brought its condemnation proceeding. R. p. 567, ll. 1-12. When the condemnation suit was brought, CWS readily allowed the town to take possession of the I-20 system and interconnect the plant, reserving its right to contest Lexington's valuation of the plant. Id.

The Commission finds that regulated utilities, like any business, will experience litigation costs associated with its business operations. CWS acted to limit exposure to liability and benefit the utility and its rate payers. The financial and litigation costs were prudently incurred. Recovery of these costs equates to \$14,979 in annual amortization expense. As Mr. Cartin testified, CWS had no alternative but to defend the Congaree Riverkeeper's lawsuit and engage in the related litigation. Therefore, CWS will be allowed to recover \$998,606 amortized over 66.7 years, at the rate of \$14,979 per year.

2. Sludge Hauling Expenses

CWS incurred \$284,233 in sludge hauling expenses at its Friarsgate Plant and at its Watergate wastewater treatment facility (“Watergate Plant”) during the test year. R. p. 753 (Payne Surr. p. 3). ORS proposed to remove \$96,892 in sludge hauling costs. ORS proposes an adjustment to allow recovery of a three-year average of annual sludge hauling costs at the two facilities.

ORS witness Payne testified that the ORS reviewed the sludge costs in the test year and the costs in the previous two years, concluding that the sludge hauling costs in the test year were atypical. R. pp. 751-752 (Payne Surr. p. 2, l. 19 – p. 3, l. 12). The ORS proposes to average the annual sludge expense for the three years reviewed and proposed an adjustment of \$96,892, normalizing this operating expense. Id.

CWS witness Gilroy testified the increase of sludge hauling expense during the test year was caused by additional sludge removal requirements at the Friarsgate WWTF which produces large amounts of sludge that must be disposed of in a timely manner. R. pp. 358-360. The amount of sludge produced depends on many factors within the process of the waste water treatment. Id. The active sludge inventory within the process must be kept at a certain concentration for the biological process to be effective and result in a clear compliant effluent. Id. Excess sludge inventory must be removed frequently to keep sludge from building up to unacceptable levels which could cause problems with effluent quality. Id.

Mr. Gilroy testified that because the Friarsgate WWTF has been on a Consent Order, these sludge inventories are also monitored by DHEC, which recommends that the

inventory to be kept at a constant rate. R. p. 365 (Gilroy Rebut. p. 3, ll. 3-12)). Ordinarily, the liquid sludge is poured into filtrate boxes that drain off the water leaving a very dry cake behind, which is then hauled and disposed of at the Northeast Sanitary Landfill. Id. When the sludge production exceeds the capacity of the filtrate boxes, CWS utilizes contractor liquid tanker trucks to haul the sludge to the City of Cayce's disposal site. Id. Disposing of the sludge in the cake form is more cost-effective than hauling truckloads of liquid sludge. Id. Although more expensive, sometimes the filtrate boxes are full, and tankers must be utilized. Id.

The Commission finds that the sludge hauling costs in the test year are recoverable as known and measurable, prudently incurred costs. The ORS does not dispute the sludge costs in the test year. It simply speculates that the costs will not recur in a similar amount. Speculation is not sufficient. Moreover, the testimony indicates that the sludge costs have increased because of the DHEC Consent Order, and were prudently incurred. The Commission denies the ORS adjustment to reduce the sludge hauling expenses.

3. Effects of the Income Tax and Jobs Act

a) Excess Accumulated Deferred Income Taxes

The Company filed its Application before Congress enacted the Tax Cuts and Jobs Act of 2017 ("TCJA"), which took effect on January 1, 2018. P.L. No: 115-97. The TCJA changed the tax laws affecting the Company. Mr. Hunter testified the TCJA reduced the corporate income tax rate from 35% to 21%, causing the Company to reduce its requested revenue requirement by approximately \$877,000. R. p. 255, ll. 16-22. This

Commission held in Order No. 2018-308 that, beginning January 1, 2018, regulatory accounting treatment is required for all regulated utilities for any impacts of the new law, including current and deferred tax impacts. We also held that the utilities should track and defer the effects resulting from the Tax Act in a regulatory liability account, and further, for water/wastewater utilities with operating revenues that are equal or greater than \$250,000, the issue will be addressed at the next rate case or other proceeding. The provisions of Order No. 2018-308 apply to the present case, as well as to other utilities indicated in Order No. 2018-308.

F. Rate Case Expenses

CWS proposed to include rate case expenses incurred in this rate case through the date of the hearing, and ORS agreed to this proposal, subject to its review of the requested additional amount and examination of supporting documentation. R p. 754 (Payne Surreb., p. 4, ll. 5-7). ORS received and reviewed documentation supporting rate case expenses of \$88,500 and informed the Commission at the hearing that the ORS agrees with them. After the hearing, CWS presented documentation supporting additional rate case expenses of \$64,560. Because the additional rate case expenses are known and measurable, the Commission will allow them to be included in the total rate case expense and amortized over three years. We find the Company is entitled to \$153,060 in total rate case expenses, including those expenses submitted to ORS post-hearing. This amount amortized over three years less the Company's per book amount yields a post-hearing adjustment of \$21,520.

G. Other Adjustments

The remaining ORS adjustments are accepted by this Commission without discussion. They either were not disputed by the parties or were caused by carrying out the effects of the adjustments adopted above.

H. Deferred Accounts

By Order No. 2015-876 in Docket No. 2015-199-WS, the Commission approved two regulatory deferred accounts authorizing CWS 1) to record and monitor all rate increases from third-party providers for water supply and sewer treatment; and 2) to recover non-revenue water expenses. The Commission authorized CWS to seek recovery of the balance of these deferred accounts, subject to audit by ORS and approval by the Commission in a subsequent rate case. In this Application CWS is seeking recovery of the balance in the regulatory deferral account associated with increases in purchased water from bulk water providers. (Application, para. 17) Mr. Hunter testified that the purchase water deferred account had a balance of \$669,808 as of March 8, 2018 and explained CWS sought recovery of this balance in this docket R. p. 278 (Hunter Rebut. p. 3 ll. 7–17). At the hearing, Mr. Payne testified that the ORS had reviewed the supporting documentation of the purchase water deferred account and that the ORS agreed with CWS' request to recover the balance of \$669,808. R. p. 752 (Payne Surreb., p. 2, ll.8-18). The Commission finds it reasonable for CWS to recover the purchased water deferred account balance of \$669,808.

Because the non-revenue water deferral account has a balance of zero, the ORS recommended this account be closed. R. p. 701 (Schellinger Dir., p. 11, l. 18 – p. 12, l.

8). The Company did not dispute this recommendation. The Commission finds it reasonable that the non-revenue water account be closed.

I. Performance Bond

CWS currently provides the maximum amount required for its performance bond in the amount of \$350,000 for water and \$350,000 for sewer operations. Using the criteria set forth in S.C. Code Regs. §§ 103-512.3.1 and 103-712.3.1, ORS recommended that CWS be required to continue the current performance bond amounts. R. p. 701 (Schellinger Dir. p. 12, ll. 9-15). CWS agreed to the performance bond amounts. The Commission requires that CWS maintain its performance bond in \$350,000 for water and \$350,000 for sewer operations.

J. Changes to Rates, Charges and Term of Service

1. Irrigation Only Meters

Mr. Cartin testified that after hearing concerns expressed by customers with irrigation only meters, the Company had determined to eliminate the base facilities charge for irrigation only meters for residential customers who are no longer receiving an economic benefit from having an irrigation meter. The impact on revenues will be \$37,946 annually. The Company is not seeking recovery of this lost revenue here. R. p. 320 (Cartin Reb., p. 5, ll. 5-20).

The ORS has no objection to eliminating the base facilities charge on customers with irrigation only meters.

The Commission finds that eliminating the base facilities charge for customers with irrigation only meters is just and reasonable and in the public interest.

2. Backflow Testing.

CWS proposed to change the terms and conditions of its tariff to permit its customers to test their backflow devices every two years. The ORS proposed to limit the testing requirement to every two years for those residential customers with irrigation cross connections. R. pp. 699 - 700 (Schellinger Dir., p. 10, l. 18 – p. 11, l. 6). CWS concurred with the ORS recommendation with the additional provision that if the sewer system utilizes chemical injection, annual testing will be required. R. p. 363 (Gilroy Rebut., p. 1, ll. 1-7).

The Commission finds that permitting CWS' residential irrigation customers to test backflow preventers every two years is reasonable, provided that if the sewer system utilizes chemical injection, annual testing will be required

3. Water Meter Installation Charge

CWS requests authority to increase its Water Meter Installation Charge from \$35.00 to \$45.00 to more closely reflect the utility's costs. (Application at ¶ 20) The ORS has reviewed the cost justification for this increase and agrees the increase is reasonable. R. p. 699 (Schellinger Dir., p. 10, ll.14 – 17). The \$45.00 charge is reasonable and CWS is authorized to increase its Water Meter Installation Charge to \$45.00.

4. Limitation of Liability

CWS seeks authority to limit the liability of the Company, its agents and employees for damages arising out of interruption of service or the failure to furnish service, whether caused by acts or omission, to those remedies provided in the

Commission's rules and regulations governing water and wastewater utilities. (Application at ¶ 22). Mr. Cartin points out that the Commission has promulgated regulations for quality of service and interruption of service. Limiting customer remedies to those provided in the regulations will eliminate the prospect of unnecessary litigation and result in cost savings which will benefit customers. R. pp. 310-311 (Cartin Dir., p. 12, l. 14 – p. 13 l. 1, l. 2). The ORS does not oppose the Company's proposed changes to tariff language regarding liability for interruption of service. Interruption of service is regulated by the Commission in S.C. Code Ann. Regs. 103-771 and 103-551. R. p. 670 (Schellinger Dir., p. 11, ll. 7–12) The proposed limitation of liability to those protections found in S.C. Code Reg. 103-771 and 103-551 is reasonable and is approved.

K. Authorized Revenues

CWS requested in its Application to increase revenues for combined operations by \$4,511,414, comprising a water revenue increase of \$2,272,914 and a sewer revenue increase of \$2,238,500, based on the rate of return on rate base methodology utilizing an ROE of 10.5% and an historical test year ending August 31, 2017. The revenue and expense adjustments to the requested increase in revenue set out herein at the approved ROE of 10.50% produce additional operating revenue of \$2,936,395 consisting of a water revenue increase of \$1,286,013 and a sewer revenue increase of \$1,650,382.

L. Rate Design

Exhibit "A" to the Application contains the Company's Schedule of Proposed Water Charges. The proposed water rate structure for Territory 1 and Territory 2 will remain the same as approved in Order No. 2015-876. In Territory 1 and Territory 2 there

will remain separate charges for Water Supply Customers (where water is supplied by wells owned and operated by CWS) and Water Distribution Customers (where water is purchased from a governmental body or agency or other entity for distribution and resale by CWS). R. p. 264 (Hunter Dir. p. 5, ll. 18–25).

Exhibit “A” to the Application contains the Company’s Schedule of Proposed Sewer Charges. Under the existing tariff, the flat rate charge for Sewer Collection & Treatment Only Customers and the flat rate charge for Sewer Collection Only Customers are two different rates. CWS proposes to combine Sewer Collection & Treatment Only Customers and Sewer Collection Only Customers into one single rate per unit. Separate rates will remain on the tariff for Mobile Homes, and The Village Sewer Collection Customers. R. p. 265 (Hunter Dir., p.6, ll. 16–23).

Rate design is a matter of discretion for the Commission. In establishing rates, it is incumbent upon us to fix rates which “distribute fairly the revenue requirements [of the utility].” See *Seabrook Island Property Owners Association v. S.C. Public Service Comm’n*, 303 S.C. 493, 499 (1991). Our determination of “fairness” with respect to the distribution of the Company’s revenue requirement is subject to the requirement that it be based upon some objective and measurable framework. See *Utilities Services of South Carolina, Inc., v. South Carolina Office of Regulatory Staff*, 392 S.C. 96, 113-114 (2011).

CWS has combined certain of its sewer rates in this docket moving closer to uniform rates. The water rate design was approved by Order No. 2015-876. No party contests the proposed rate design and it is approved by the Commission.

M. Forty Love Point

The Forty Love Point Homeowners Association intervened questioning sewer service in the neighborhood. Barbara King and Jay Dixon, residents of the Forty Love subdivision, testified that they experienced sewer backups in their homes and chronicled the efforts of CWS to address their concerns. Representatives of CWS and its engineers, DHEC and ORS have met with the witnesses. CWS provides collection only services to Forty Love and Richland County treats the sewage. The witnesses testified that Richland County and CWS should coordinate any remedy for the customer concerns. The witnesses believe their sewer system is outdated and inadequate. The witnesses also contest the proposed rate increase. R. pp. 608–610 (Dixon Dir. p. 1, l. 1 – p. 4, l. 76); R. pp. 603 – 605 (King Dir., p. 1, l. 1 – p. 3, l. 59).

CWS witness Gilroy testified that the Forty Love sewer system is a LETTS design installed by the developer. LETTS systems are modified septic tanks in which solid waste accumulates in a holding tank with the gray water draining to a common sewer main for transport to the Richland County Utilities treatment plant. CWS has been working with the Kings and Dixons to determine why their LETTS tanks fail to drain during prolonged rain events. CWS believes the elevation and distance between their finished basements and the sewer main outside provides for no leeway when the sewer main backs up slightly. CWS has a contractor working to install a pump tank that will both pump their water into the main and provide the separation needed to eliminate backups of their homes. R. pp. 363–364 (Gilroy Rebut., p. 1, l. 8 – p. 2, l. 10).

CWS is also retaining a professional engineering firm to inspect the system and help solve the sewerage backup problems experienced by these customers. While it is working towards a permanent solution, CWS will continue to alleviate the problem by dispatching pump trucks to the neighborhood when heavy rains are anticipated. CWS is also inspecting each LETTS tank and will reseal them as necessary. Reduced water from the tanks should ease the stress placed on the system. Id.

CWS will continue to communicate the engineering assessment with the outside contractor with Forty Love. CWS and Forty Love have agreed to report their findings to the Commission and ORS in six months – by September 30, 2018. Id. The Commission finds that the agreement between CWS and Forty Love is reasonable.

CWS and the HOA have agreed to the following plan of action which, at their request, the Commission incorporates in its Order:

CWS acknowledges that some of its customers in the Forty Love Point neighborhood have experienced problems with sewerage backups. CWS has taken, and will continue to take, measures to address these customers' concerns. CWS and the HOA agree to cooperatively investigate the source and extent of sewerage problems experienced by customers in the Forty Love Point neighborhood and formulate a plan to address them. The company is retaining an engineering firm to perform an assessment of the Forty Love Point system, and CWS will continue to work with DHEC and Richland County to determine whether issues with the latter's system may be affecting Forty Love Point. CWS and the HOA will report their findings to the PSC and the ORS in six months.

N. Dancing Dolphin, LLC

The Commission requested that the ORS investigate the allegations made by CWS' customer the Dancing Dolphin, LLC. The ORS recommends that CWS complete an inflow and infiltration study and a cost benefits analysis for the sewer system serving the properties owned by the Dancing Dolphin. R. pp. 705– 706 (Schellinger Dir., p. 16, l. 20 - -p. 17, l. 3) CWS will conduct an inflow and infiltration study and provide a report to the Commission within one year of the date of the Order. R. pp. 317–318 (Cartin Rebut., p. 2, 19 - p. 3, l. 2). In addition, CWS has credited the Dancing Dolphin, LLC with one month's bill to address the customer's concerns. R. p. 310 (Cartin Dir. p. 12, ll. 12–13). The Commission finds CWS conduct to be prudent and reasonable.

O. Customer Communications

The record reflects that CWS is working to give its customers a better understanding of the pressures and costs of operating its water and sewer systems. The Company has hired a communications coordinator to direct its customer outreach activities. R. pp. 251-253. Since December of 2017, CWS scheduled meetings with its customers in York County on December 4, 2017, and February 27, 2018; Lexington County on December 5, 2017; Anderson County on December 6, 2017; Richland County on February 21, 2018, and Greenville County on March 1, 2018. At those meetings, CWS gave customers the opportunity to meet with its management and field personnel to learn more about its operations and cost of service. R. p. 371 (Gilroy Resp., p.1, ll. 6–16).

This Commission would observe that, in prior years, the Company's customer service was perceived by some as being below standard. However, the Company's testimony in this case shows that it is committed to improvement in a proactive fashion. Relatively few customers appeared to complain about quality of service, as compared to the last several rate cases. We hold that the Company should routinely be responsive on quality of service issues, and that CWS should set the standard for quality and customer service.

However, in order to ensure that the Company is being responsive to quality of service issues, and to its customers, CWS shall prepare a report and submit it to the Commission and to ORS no less than semiannually, and the document should have headings for "Customer Complaint," "Company Response," "Customer Reaction to Company," and explain the Company reaction to Customer Complaints during the period addressed, along with any explanations regarding quality of service. The Company shall also submit a separate report no less than semiannually reporting on all capital improvements made during the period to enhance customer service and to explain the cost of such capital improvements.

III. FINDINGS OF FACT

1) CWS is a water and sewer utility providing water and sewer service in its assigned service area in South Carolina. The Commission is vested with authority to regulate rates of every public utility in this state and to ascertain and fix just and reasonable rates for service. S.C. §58-5-210, et. seq. CWS's operations in South Carolina are subject to the jurisdiction of the Commission.

2) CWS requested in its Application to increase revenues for combined operations by \$4,511,414 comprising a water revenue increase of \$2,272,914 and a sewer revenue increase of \$2,238,500, based on the rate of return on rate base methodology utilizing an ROE of 10.5% and a historical test year ending August 31, 2017.

3) The test year period for this proceeding, selected by the Company, is September 1, 2016 through August 31, 2017.

4) The Commission will use the return on rate base methodology in determining and fixing just and reasonable rates.

5) The return on rate base methodology requires three components: capital structure, cost of debt, and cost of equity (or ROE).

6) CWS's rate base is \$55,524,956 after the adjustments adopted by the Commission.

7) The Commission adopts and approves of a capital structure of 48.11% long-term debt and 51.89% equity; a cost of debt rate of 6.60%; and an ROE of 10.50%.

8) The approved capital structure, cost of debt rate, and ROE produce additional operating revenue of \$2,936,395 consisting of a water revenue increase of \$1,286,013 and a sewer revenue increase of \$1,650,382.

9) The approved revenues and expenses establish a fair and reasonable operating margin of 13.23%, and a return on rate base of 8.62%.

10) The schedule of rates and terms and conditions attached to this Order as Order Exhibit 1(A) are just and reasonable and designed to achieve the Company's new revenue requirement.

IV. CONCLUSIONS OF LAW

Based upon the discussion, findings of fact and the record of the instant proceeding, the Commission makes these Conclusions of Law:

1) CWS is a public utility as defined in S.C. Code § 58-5-10(3) and is subject to the jurisdiction of this Commission.

2) The appropriate test year on which to set rates for CWS is the twelve-month period beginning September 1, 2016 and ending August 31, 2017.

3) Based on the information provided by the parties, the Commission concludes the rate setting methodology to use as a guide in determining the lawfulness of CWS's proposed rates and for fixing just and reasonable rates is return on rate base.

4) For CWS to have the opportunity to earn the 10.5% ROE, found fair and reasonable herein, CWS must be allowed additional revenues of \$2,936,395.

5) The schedule of rates and terms and conditions in the attached Order Exhibit 1(A) are approved for use by CWS and are just and reasonable without undue discrimination and are also designed to meet the revenue requirements of CWS.

6) Pursuant to S.C. Code § 58-5-720 and 10 S.C. Code Regs. §§ 103-512.3 and 103-712.3, CWS will post a performance bond of \$350,000 for water and \$350,000 for sewer operations.

V. ORDERING PROVISIONS

IT IS THEREFORE ORDERED THAT:

I. The rates, fees, and charges in Order Exhibit 1(A) are both fair and reasonable and will allow CWS to continue to provide its customers with adequate water and wastewater services.

II. The Company is to provide thirty (30) days' notice of the increase to customers of its water and wastewater services prior to the rates and schedules being put into effect for service rendered. The schedules will be deemed filed with the Commission under S.C. Code § 58-5-240.

III. An ROE of 10.5%, return on rate base of 8.62% and operating margin of 13.23% based on the new rates, fees, and charges, is approved for CWS.

IV. The Company will continue to maintain current performance bonds in the amounts of \$350,000 for water operations and \$350,000 for wastewater operations pursuant to S.C. Code § 58-5-720.

V. The Company shall provide the written reports on quality of service and capital improvements no less than semiannually as described above.

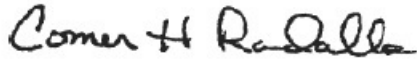
VI. This Order will remain in full force and effect until further order of the Commission.

BY ORDER OF THE COMMISSION:



Swain E. Whitfield, Chairman

ATTEST:



Comer H. Randall, Vice Chairman

Carolina Water Service, Inc.
Docket No. 2017-292-WS
SCHEDULE OF RATES AND CHARGES

WATER

Service Territory 1

Monthly Charges - Water Supply Customers Only

Where water is supplied by wells owned and operated by the Utility, the following rates apply:

	<u>Current</u>	<u>Ordered</u>
<u>Residential</u>		
Base Facilities Charge per single-family house, condominium, mobile home, or apartment unit	\$14.64 per unit	\$14.38 per unit
Residential Commodity Charge	\$5.69 per 1,000 gal. or 134 cft.	\$5.59 per 1,000 gal. or 134 cft.
<u>Commercial</u>		
Base Facilities Charge by meter size		
5/8" meter *	\$ 14.64 per unit	\$ 14.38 per unit
3/4" meter	\$ 14.64 per unit	\$ 14.38 per unit
1" meter	\$ 38.10 per unit	\$ 37.43 per unit
1.5" meter	\$ 76.21 per unit	\$ 74.86 per unit
2" meter	\$ 121.93 per unit	\$ 119.78 per unit
3" meter	\$ 228.63 per unit	\$ 224.59 per unit
4" meter	\$ 381.16 per unit	\$ 374.42 per unit
8" meter	\$1,171.21 per unit	\$1,150.51 per unit
Commercial Commodity Charge	\$5.69 per 1,000 gal. or 134 cft.	\$5.59 per 1,000 gal. or 134 cft.

Monthly Charges - Water Distribution Customers Only

Where water is purchased from a governmental body or agency or other entity for distribution and resale by the Utility, the following rates apply:

<u>Residential</u>		
Base Facilities Charge per single-family house, condominium, mobile home, or apartment unit	\$14.64 per unit	\$14.38 per unit
Residential Commodity Charge	\$6.67 per 1,000 gal. or 134 cft.	\$7.55 per 1,000 gal. or 134 cft.

Carolina Water Service, Inc.
Docket No. 2017-292-WS
SCHEDULE OF RATES AND CHARGES

	<u>Current</u>	<u>Ordered</u>
<u>Commercial</u>		
Base Facilities Charge		
by meter size		
5/8" meter *	\$ 14.64 per unit	\$ 14.38 per unit
3/4" meter	\$ 14.64 per unit	\$ 14.38 per unit
1" meter	\$ 38.10 per unit	\$ 37.43 per unit
1.5" meter	\$ 76.21 per unit	\$ 74.86 per unit
2" meter	\$ 121.93 per unit	\$ 119.78 per unit
3" meter	\$ 228.63 per unit	\$ 224.59 per unit
4" meter	\$ 381.16 per unit	\$ 374.42 per unit
8" meter	\$1,171.21 per unit	\$1,150.51 per unit
Commercial Commodity Charge		
	\$6.67 per 1,000 gal. or 134 cft.	\$7.55 per 1,000 gal. or 134 cft/

***A "Fire Line" customer will be billed a monthly base facilities charge of a 5/8" meter or at the rate of any other meter size used as a detector.**

Carolina Water Service, Inc.
Docket No. 2017-292-WS
SCHEDULE OF RATES AND CHARGES

Service Territory 2

Monthly Charges - Water Supply Customers

Where water is supplied by wells owned and operated by the Utility, the following rates apply:

	<u>Current</u>	<u>Ordered</u>
<u>Residential</u>		
Base Facilities Charge per single-family house, condominium, mobile home or apartment unit:	\$24.72 per unit	\$28.59 per unit
Residential Commodity Charge	\$ 8.88 per 1,000 gal. or 134 cft.	\$10.27 per 1,000 gal. or 134 cft.
<u>Commercial</u>		
Base Facilities Charge by meter size		
5/8" meter*	\$ 24.72 per unit	\$ 28.59 per unit
1" meter	\$ 68.81 per unit	\$ 79.59 per unit
1.5" meter	\$ 126.45 per unit	\$146.27 per unit
3" meter	\$ 431.52 per unit	\$499.14 per unit
Commercial Commodity Charge	\$ 8.88 per 1,000 gal. or 134 cft.	\$10.27 per 1,000 gal. or 134 cft.

Monthly Charges - Water Distribution Customers Only

Where water is purchased from a governmental body or agency or other entity for distribution and resale by the Utility, the following rates apply:

<u>Residential</u>		
Base Facilities Charge per single-family house, condominium, mobile home or apartment unit:	\$ 24.72 per unit	\$ 28.59 per unit
Residential Commodity Charge	\$ 9.41 per 1,000 gal. or 134 cft.	\$ 11.85 per 1,000 gal. or 134 cft.
<u>Commercial</u>		
Base Facilities Charge by meter size:		
5/8" meter*	\$ 24.72 per unit	\$ 28.59 per unit
1" meter	\$ 68.81 per unit	\$ 79.59 per unit
1.5" meter	\$ 126.45 per unit	\$146.27 per unit
3" meter	\$ 431.52 per unit	\$499.14 per unit
Commercial Commodity Charge	\$ 9.41 per 1,000 gal. or 134 cft.	\$ 11.85 per 1,000 gal. or 134 cft.

Carolina Water Service, Inc.
Docket No. 2017-292-WS
SCHEDULE OF RATES AND CHARGES

***A “Fire Line” customer will be billed a monthly base facilities charge of a 5/8” meter or at the rate of any other meter size used as a detector.**

Carolina Water Service, Inc.
Docket No. 2017-292-WS
SCHEDULE OF RATES AND CHARGES

WATER SERVICE
TERMS AND CONDITIONS
AND
NON-RECURRING CHARGES

1. Terms and Conditions

A. Where the Utility is required by regulatory authority with jurisdiction over the Utility to interconnect to the water supply system of a government body or agency or other entity and tap/connection/impact fees are imposed by that entity, such tap/connection/impact fees will also be charged to the Utility's affected customers on a pro rata basis, without markup.

B. Commercial customers are those not included in the residential category above and include, but are not limited to, hotels, stores, restaurants, offices, industry, etc.

C. The Utility will, for the convenience of the owner, bill a tenant in a multi-unit building, consisting of four or more residential units (or in such other circumstances as the law may allow from time to time), which is served by a master water meter or a single water connection. However, in such cases all arrearages must be satisfied before service will be provided to a new tenant or before interrupted service will be restored. Failure of an owner to pay for services rendered to a tenant in these circumstances may result in service interruptions.

D. When, because of the method of water line installation utilized by the developer or owner, it is impractical to meter each unit separately, service will be provided through a single meter, and consumption of all units will be averaged; a bill will be calculated based on that average and the result multiplied by the number of units served by a single meter.

E. Billing Cycle

Recurring charges will be billed monthly in arrears. Nonrecurring charges will be billed and collected in advance of service being provided.

F. Extension of Utility Service Lines and Mains

The Utility shall have no obligation at its expense to extend its utility service lines or mains in order to permit any customer to connect to its water system. However, anyone or entity which is willing to pay all costs associated with extending an appropriately sized and constructed main or utility service line from his/her/its premises to any appropriate connection point, and pay the appropriate fees and charges as set forth in this rate schedule, and comply with the guidelines and standards hereof, shall not be denied service unless water supply is unavailable or unless the South Carolina Department of Health and Environmental Control or other government entity has for any reason restricted the Utility from adding additional customers to the serving water system. In no event will the Utility be required to construct additional water supply capacity to serve any customer or entity without an agreement acceptable to the Utility first having been reached for the payment of all costs associated with adding water supply capacity to the affected water system.

Carolina Water Service, Inc.
Docket No. 2017-292-WS
SCHEDULE OF RATES AND CHARGES

G. Cross-Connection Inspection

Any customer installing, permitting to be installed, or maintain any cross connection between the Utilities water system and any other non-public water system, sewer, or a line from any container of liquids or other substances, must install an approved back-flow prevention device in accordance with 24A S.C. Code Ann. Regs. R.61-58.7.F.2, as may be amended for time to time. Such a customer shall have such cross connection inspected by a licensed certified tester and provide to Utility a copy of written inspection report indicating the back-flow device is functioning properly and testing results submitted by the tester in accordance with 24A S.C. Code Ann. Regs. R.61-58.7.F.2, as may be amended from time to time. Said report and results must be provided by the customer to the Utility no later June 30th of each year for required commercial customers and no later than June 30th of every other year for required residential customers. Should a customer subject to these requirements fail to timely provide such report and results, Utility may arrange for inspection and testing by a licensed certified tester and add the charges incurred by the Utility in that regard to the customer's next bill. If after inspection and testing by the Utility's certified tester, the back-flow device fails to function properly, the customer will be notified and given a 30 day period in which to have the back-flow device repaired or replaced with a subsequent follow-up inspection by a licensed certified tester indicating the back-flow device is functioning properly. Failure to submit a report indicating the back-flow device is functioning properly will result in discontinuation of water service to said customer until such time as a passing inspection report is received by Utility.

H. A Single Family Equivalent (SFE) shall be determined by using the South Carolina Department of Health and Environmental Control Guidelines for Unit Contributory Loadings for Domestic Wastewater Treatment Facilities -- 6 S.C. Code Ann. Regs. 61-67 Appendix A, as may be amended from time to time. Where applicable, such guidelines shall be used for determination of the appropriate monthly service and tap fee. The Company shall have the right to request and receive water usage records from the water provider to its customers. In addition, the Company shall have the right to conduct an inspection of the customer's premises. If it is determined that actual flows or loadings are greater than the design flows or loadings, then the Company shall recalculate the customer's equivalency rating based on actual flows or loadings and thereafter bill for its services in accordance with such recalculated loadings.

I. The liability of the Company, its agents and employees for damages arising out of interruption of service or the failure to furnish service, whether caused by acts or omission, shall be limited to those remedies provided in the Public Service Commission's rules and regulations governing water utilities.

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2. Non-Recurring Charges

A. Water Service Connection (New connections only) - \$300 per SFE*

B. Plant Impact Fee (New connections only) - \$400 per SFE*

The Plant Capacity Fee reflects the portion of plant capacity which will be used to provide service to the new customers as authorized by Commission Rule R. 103-702.13. The plant capacity fee represents the Utility's investment previously made (or planned to be made) in constructing water production, treatment and/or distribution facilities that are essential to provide adequate water service to the new customer's property.

C. Water Meter Installation - 5/8 inches x 3/4 inches meter \$45.00

All 5/8 inch x 3/4 inch water meters shall meet the Utility's standards and shall be installed by the Utility. A one-time meter fee of \$45 shall be due upon installation for those locations where no 5/8 inch x 3/4 inch meter has been provided by a developer to the Utility.

For the installation of all other meters, the customer shall be billed for the Utility's actual cost of installation. All such meters shall meet the Utility's standards and be installed by the Utility unless the Utility directs otherwise.

D. Customer Account Charge – (New customers only) \$30.00

A one-time fee to defray the costs of initiating service.

E. Reconnection Charges: In addition to any other charges that may be due, in those cases where a customer's service has been disconnected for any reason as set forth in Commission Rule R.103-732.5, a reconnection fee shall be due in the amount of \$40.00 and shall be due prior to the Utility reconnecting service.

F. Tampering Charge: In the event the Utility's equipment, water mains, water lines, meters, curb stops, service lines, valves or other facilities have been damaged or tampered with by a customer, the Utility may charge the customer responsible for the damage the actual cost of repairing the Utility's equipment, not to exceed \$250. The tampering charge shall be paid in full prior to the Utility re-establishing service or continuing the provision of service.

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SEWER

Service Territory 1 and 2

(Customers of Carolina Water Service, Inc., and former Utilities Services of SC, Inc. and United Utility Companies, Inc.)

Monthly Charges – Sewer Collection & Treatment Only

Where sewage collection and treatment are provided through facilities owned and operated by the Utility, the following rates apply:

	<u>Current</u>	<u>Ordered</u>
Residential - charge per single-family house, condominium, villa, or apartment unit:	\$57.58 per unit	\$65.77 per unit
Mobile Homes:	\$42.01 per unit	\$47.94 per unit
Commercial	\$57.58 per SFE*	\$65.77 per SFE*

Commercial customers are those not included in the residential category above and include, but are not limited to, hotels, stores, restaurants, offices, industry, etc.

Monthly charge – Sewer Collection Only

When sewage is collected by the Utility and transferred to a government body or agency, or other entity for treatment, the Utility's rates are as follows:

Residential – per single-family house, condominium, or apartment unit	\$52.93 per unit	\$65.77 per unit
Commercial	\$52.93 per SFE*	\$65.77 per SFE*
Wholesale Service (Midlands Utility)	\$26.66 per SFE*	\$N/A per SFE*
The Village Sewer Collection	\$29.95 per SFE*	\$34.18 per SFE*

* Single Family Equivalent (SFE) shall be determined by using the South Carolina Department of Health and Environmental Control Guidelines for Unit Contributory Loadings for Domestic Wastewater Treatment Facilities -- 25 S.C. Code Ann. Regs. 61-67 Appendix A, as may be amended from time to time. Where applicable, such guidelines shall be used for determination of the appropriate monthly service and tap fee.

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SEWER SERVICE
TERMS AND CONDITIONS
AND
NON-RECURRING CHARGES

1. Terms and Conditions

- A. Where the Utility is required under the terms of a 201/208 Plan, or by other regulatory authority with jurisdiction over the Utility, to interconnect to the sewage treatment system of a government body or agency or other entity and tap/connection/impact fees are imposed by that entity, such tap/connection/impact fees will be charged to the Utility's affected customers on a pro rata basis, without markup.
- B. The Utility will, for the convenience of the owner, bill a tenant in a multi-unit building, consisting of four or more residential units (or in such other circumstances as the law may allow from time to time), which is served by a master sewer meter or a single sewer connection. However, in such cases all arrearages must be satisfied before service will be provided to a new tenant or before interrupted service will be restored. Failure of an owner to pay for services rendered to a tenant in these circumstances may result in service interruptions.

C. Billing Cycle

Recurring charges will be billed monthly in arrears. Non-recurring charges will be billed and collected in advance of service being provided.

D. Toxic and Pretreatment Effluent Guidelines

The utility will not accept or treat any substance or material that has been defined by the United States Environmental Protection Agency ("EPA") or the South Carolina Department of Health and Environmental Control ("DHEC") as a toxic pollutant, hazardous waste, or hazardous substance, including pollutants falling within the provisions of 40 CFR 129.4 and 401.15. Additionally, pollutants or pollutant properties subject to 40 CFR 403.5 and 403.6 are to be processed according to pretreatment standards applicable to such pollutants or pollutant properties, and such standards constitute the Utility's minimum pretreatment standards. Any person or entity introducing such prohibited or untreated materials into the Company's sewer system may have service interrupted without notice until such discharges cease, and shall be liable to the Utility for all damages and costs, including reasonable attorney's fees, incurred by the Utility as a result thereof.

E. Extension of Utility Service Lines and Mains

The Utility shall have no obligation at its expense to extend its utility service lines or mains in order to permit any customer to discharge acceptable wastewater into one of its sewer systems. However, anyone or entity which is willing to pay all costs associated with extending an appropriately sized and constructed main or utility service line from his/her/its premises to any appropriate connection point, and pay the appropriate fees and charges as set forth in this rate schedule, and comply with the guidelines and standards hereof, shall not be denied service unless sewer capacity is unavailable or unless the South Carolina Department of Health and Environmental Control or other government entity has for any reason restricted the Utility from adding additional customers to the serving sewer system.

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In no event will the Utility be required to construct additional sewer treatment capacity to serve any customer or entity without an agreement acceptable to the Utility first having been reached for the payment of all costs associated with adding wastewater treatment capacity to the affected sewer system.

F. A Single Family Equivalent (“SFE”) shall be determined by 6 S.C. Code Ann. Regs. 61-67 Appendix A, as may be amended from time to time. Where applicable, such guidelines shall be used for determination of the appropriate monthly service, plant impact fee and tap fee. The Company shall have the right to request and receive water usage records from the water provider to its customers. In addition, the Company shall have the right to conduct an inspection of the customer’s premises. If it is determined that actual flows or loadings are greater than the design flows or loadings, then the Company shall recalculate the customer’s equivalency rating based on actual flows or loadings and thereafter bill for its services in accordance with such recalculated loadings.

G. The liability of the Company, its agents and employees for damages arising out of interruption of service or the failure to furnish service, whether caused by acts or omission, shall be limited to those remedies provided in the Public Service Commission’s rules and regulations governing wastewater utilities.

2. **Solids Interceptor Tanks**

For all customers receiving sewage collection service through an approved solids interceptor tank, the following additional charges shall apply:

A. **Pumping Charge**

At such time as the Utility determines through its inspection that excessive solids have accumulated in the interceptor tank, the Utility will arrange for the pumping tank and will include \$150.00 as a separate item in the next regular billing to the customer.

B. **Pump Repair or Replacement Charge**

If a separate pump is required to transport the customer’s sewage from solids interceptor tank to the Utility’s sewage collection system, the Utility will arrange to have this pump repaired or replaced as required and will include the cost of such repair or replacement as a separate item in the next regular billing to the customer and may be paid for over a one-year period.

C. **Visual Inspection Port**

In order for a customer who uses a solids interceptor tank to receive sewage service from the Utility or to continue to receive such service, the customer shall install at the customer’s expense a visual inspection port which will allow for observation of the contents of the solids interceptor tank and extraction of test samples therefrom. Failure to provide such visual inspection port after timely notice of not less than thirty (30) days shall be just cause for interruption of service until a visual inspection port has been installed.

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3. Non-recurring Charges

A. Sewer Service Connection (New connections only) \$300 per SFE

B. Plant Capacity Fee (New connections only) \$400 per SFE

The Plant Capacity Fee shall be computed by using South Carolina DHEC "Guide Lines for Unit Contributory Loadings to Wastewater Treatment Facilities" (1972) to determine the single family equivalency rating. The plant capacity fee represents the Utility's investment previously made (or planned to be made) in constructing treatment and/or collection system facilities that are essential to provide adequate treatment and disposal of the wastewater generated by the development of the new property.

The nonrecurring charges listed above are minimum charges and apply even if the equivalency rating of non-residential customer is less than one (1). If the equivalency rating of a non-residential customer is greater than one (1), then the proper charge may be obtained by multiplying the equivalency rating by the appropriate fee. These charges apply and are due at the time new service is applied for, or at the time connection to the sewer system is requested.

C. Notification Fee

A fee of \$15.00 shall be charged to each customer per notice to whom the Utility mails the notice as required by Commission Rule R. 103-535.1 prior to service being discontinued. This fee assesses a portion of the clerical and mailing costs of such notices to the customers creating the cost.

D. Customer Account Charge - (New customers only) \$30.00

A one-time fee to defray the costs of initiating service. This charge will be waived if the customer is also a water customer.

E. Reconnection Charges: In addition to any other charges that may be due, in those cases where a customer's service has been disconnected for any reason as set forth in Commission Rule R. 103-532.4 a reconnection fee in the amount of \$500.00 shall be due at the time the customer reconnects service. Where an elder valve has been previously installed, a reconnection fee of \$40.00 shall be charged.

F. Tampering Charge: In the event the Utility's equipment, sewage pipes, meters, curb stops, service lines, elder valves or other facilities have been damaged or tampered with by a customer, the Utility may charge the customer responsible for the damage the actual cost of repairing the Utility's equipment, not to exceed \$250. The tampering charge shall be paid in full prior to the Utility re-establishing service or continuing the provision of service.